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TAIL BITING IN PIGS – HOW IT RELATES TO OTHER BEHAVIOURAL DISORDERS AND DISEASES

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Introduction and Objectives

Behavioural disorders such as tail biting must be perceived as the animals' reaction to an intolerable situation, e.g. when they are deprived of the opportunity to perform normal behaviour patterns (1) and/or exposed to an intolerably high stress level (3). It is not easy to prevent or cure tail biting, since an outbreak is often influenced by numerous factors. In theory, one of these factors could be the presence of a disease (2). Performance of tail biting and the presence of disease might be related because disease and tail biting both act as a stressor on the affected animals and therefore lower the threshold for development of the other (5). Furthermore, a diseased animals might be a more interesting and easy victim for the tail biter.

In this study, we aimed to elucidate the relationship between tail wounds and various common clinical symptoms in pigs. In doing so, we hypothesised that tail wounds would be associated with the presence of: (A) respiratory diseases, (B) gastrointestinal diseases, (C) lameness or (D) disease related to the integument.

Material and Methods

A cross-sectional study was performed in 98 herds randomly allocated all over Denmark. The participating herds were subjected to a clinical examination during two farm visits, six to eight weeks apart.

A standardized clinical examination on pen level was performed in 10,378 randomly selected pens. The number of animals showing clinical symptoms were recorded, and the number of animals in each pen was counted. Additionally, the average weight of the pigs in each pen was estimated.

Results and Discussion

The results revealed that the prevalence of tail wounds was 1.2%. The highest frequency of tail wounds was seen among pigs weighing 60 kg or more and from October to December. The prevalence's of the various clinical symptoms showed a seasonal influence (Mixed procedure, sas, P=0.022) and was influenced by the pigs' weight (Mixed procedure, sas, P<0.001). As shown in table 1, ear necroses and respiratory diseases were correlated to tail wounds during spring and summer, while lameness and tail wounds were correlated all year round. Tail wounds and the various clinical symptoms were only correlated in pigs weighing more than 30 kg.

Table 1. Significant correlations (Spearman correlation coefficient) between tail wounds and clinical symptoms when taken account for seasonal influence and the pigs weight.

Clinical symptoms	*Season*	*weight*
Ear necroses	2) 0.079 4) 0.072	B) 0.089 C) 0.039
Flank lesions	no influence	B) 0.043
Lameness	1) 0.172 2) 0.124 3) 0.083 4) 0.088	B) 0.048 C) 0.151
Resp. diseases	4) 0.094	B) 0.051

Season: 1) Jan., Feb., March 2) April, May, June 3) July, Aug., Sep. 4) Oct., Nov., Dec. Weight: A) =<30 kg. B) >30kg<60 kg. C) >60kg. ns: non-significant.

Even though the correlations are very low, they are significant, and a relation between tail biting and an impaired health should therefore not be ignored. The presence of a respiratory disease or lameness in a pen could in combination with other factors be responsible for an outbreak of tail biting. First of all, because a sick animal are more prone to show behavioural disorders, such as tail biting (3). Secondly, because of altered behaviour and appearance, these animals may be more interesting to nibble and bite. However, one should be aware that a tail-bitten pig may show symptoms of lameness and respiratory diseases as a consequence. Additionally, it should be emphasized that this kind of study does not reveal whether tail biting is the cause or the effect. The relation between tail biting and flank lesions in pigs weighing between 30 and 60 kg are not surprising, because it is often the same factors, such as a stimulus-deprived environment and weaning age, that influence the occurrence of these behavioural disorders (1,4). Ear necrosis and tail wounds seemed to be correlated during spring and summer, which indicate that warm weather and high humidity may influence the occurrence of both.

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